

REMARKS

Claims 1-16 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Independent claims 1, 13, 19 and 20 have been amended in a readily apparent manner to address this rejection. Withdrawal of the rejection is respectfully requested.

Claims 1-20 and 23-24 stand 35 U.S.C. §112, second paragraph as being incomplete for omitting essential steps. Applicants respectfully disagree with the Examiner that an essential step is omitted. In any event, the claims have been amended to address this rejection.

Claims 1, 17 and 23 stand rejected under 35 U.S.C. §102(b) as being anticipated by Jacobson et al. (US 4,787,252). Applicants respectfully traverse this rejection.

As amended, the independent claims recite that the *pulse Doppler method employs a first circuit for detecting Doppler frequency from a reception wave received from a first transducer, and that the transit time method employs a second circuit for performing signal amplification from a reception wave received from a second transducer*. In the present invention, two separate circuits are used to determine the flow rate based on the Doppler method and the transit time method. Reception waves are generated separately from each of the two circuits, and the final flow rate is determined by a control unit switching between one or the other method, depending on the reliability of the signals that are received from the current method.

In contrast, the Jacobson et al. reference discloses a single circuit, a flow meter 6, for determining a flow rate using a number of different methods, including transit time, Doppler, and correlation tag. The device of Jacobson, therefore, requires a complicated system which requires one circuit processing all the signals based on the different types of information received. Thus, Jacobson does not disclose or suggest the claimed features for selecting between two separate circuits that perform two different flow rate measuring methods.

Moreover, the Jacobson device uses the same transducers 2 and 3 for collecting information signals relating to the flow rate regardless of the type of method ultimately employed. In fact, Jacobson teaches that using a single pair of transducers for multiple measuring modes is an advantage of its invention (see col. 11, lines 34-35). In the present invention each of the circuits for pulse Doppler method and the transit time method have a dedicated transducer from which reception wave is received. For these reasons, claims 1, 17 and 23 and their respective dependent claims are allowable over the cited reference.

Claims 2-16, 18-20 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Jacobson et al. in view of Akiyama (US 5,557,148). Applicants respectfully traverse this rejection, because the cited references, even if combined, still would not disclose or suggest employing a first circuit for detecting Doppler frequency from a reception wave received from a first transducer or a second circuit for performing signal amplification from a reception wave received from a second transducer.

The Akiyama reference relates to an ultrasonic flow meter and does not disclose or suggest features for selecting between different flow rate measuring methods. Therefore, even if combined with Jacobson et al., it would not remedy the features of the present invention described above that are missing from Jacobson et al. For at least this reason, the claims are believed to be allowable over the cited references.

For all of the foregoing reasons, Applicants submit that this Application is in condition for allowance, which is respectfully requested. The Examiner is invited to contact the undersigned attorney if an interview would expedite prosecution.

If a Petition under 37 C.F.R. §1.136(a) for an extension of time for response is required to make the attached response timely, it is hereby petitioned under 37 C.F.R. §1.136(a) for an extension of time for response in the above-identified application for the period required to make the attached response timely. The Commissioner is hereby authorized to charge any additional fees which may be required to this Application under 37 C.F.R. §§1.16-1.17, or credit any overpayment, to Deposit Account No. 07-2069.

Respectfully submitted,

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